

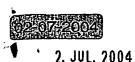
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CLAIMS

- A screening method for regulatory enzymes, the method comprising 1. the construction of tribrid cells containing genes encoding an expression library of putative enzymes, a bait protein or polypeptide fused to a known DNA binding domain and a prey protein which is an antibody that recognises a protein or polypeptide which has been post translationally modified, the prey protein being attached to a known protein active domain, whereby, in use, binding or recognition of the bait protein or polypeptide by the prey protein or polypeptide upon post-translational modification by an enzyme contained in the expression library, causes transcription of a reporter gene or genes which allow recognition of the enzyme activity.
- A method according to claim 1, in which the cell is a eukaryote. 2.
- A method according to claim 1 or claim 2, in which the cell is a yeast 3. cell.
- A method according to any one of claims 1 to 3, in which the enzyme is 4. involved in the post-translational modification of nascent proteins or polypeptides.
- 5. A method according to claim 4, in which the enzyme is involved in the regulation of phosphorylation, glycosylation, sulphonation, acetylation. side chain modification, nitrosylation, ubiquination, myristoylation or palmitoylation.
- A method according to claim 4 or claim 5, in which the enzyme is a 6. kinase or a phosphatase.

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- 7. A method according to any preceding claim, in which the bait protein is an oncoprotein, a kinase, a phosphatase, a receptor protein, an adapter protein or a scaffolding protein.
- 8. A method according to any preceding claim, in which the prey protein is conformationally constrained within the cell.
- 9. A method according to claim 8, in which the prey protein is conformationally constrained by linkage of the carboxy and amino termini of the protein.
- 10. A method according to any preceding claim, in which the prey protein further comprises an epitope tag to enable rapid detection of fusion protein synthesis.
- 11. A tribrid cell for use in the method of claims 1 to 10, said tribrid cell being engineered to express an enzyme or putative enzyme from a cDNA library, a bait protein or polypeptide fused to a known DNA binding domain and a prey protein which is an antibody that recognizes a protein or polypeptide which has been post translationally modified, the prey protein being attached to a known protein active domain, whereby, in use, binding or recognition of the bait protein or polypeptide by the prey protein or polypeptide upon post-translational modification by the enzyme from the cDNA library causes transcription of a reporter gene or genes which allow recognition of the enzyme activity.
- 12. A tribrid cell according to claim 11, in which the cell is a eukaryote cell.
- 13. A cell according to claim 11 or claim 12, in which the cell is a yeast cell.

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- 14. A method substantially as hereinbefore described with reference to and as illustrated by the Examples.
- 15. A cell substantially as hereinbefore described with reference to and as illustrated by the Examples.

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